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IMPORTANCE OF A KNOWLEDGE

OF

DISEASES OF THE EAR

TO THE

STUDENT AND GENERAL PRACTITIONER OF MEDICINE.

LECTURE, INTRODUCTORY TO A COURSE ON DISEASES OF THE EAR,  
DELIVERED AT THE GLASGOW WESTERN INFIRMARY,  
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THE propriety of including DISEASES OF THE EAR among the subjects on which candidates for Medical and Surgical Diplomas are examined, has already been advocated by several writers, and especially by Professor von Tröltsch, the eminent German aural surgeon.

It is hoped that the issue of this Lecture, in a separate and more permanent form, will contribute to the formation of a sound professional opinion on the matter, and to some recognition of this department of Medicine by the Medical Examining Boards.

10 ALBANY PLACE, CHARING CROSS,  
GLASGOW, *January, 1881.*

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## LECTURE.

GENTLEMEN,—Until recently, there was probably no part of the body the diseases of which received so little attention, from the student or practitioner of medicine, as the organ of hearing. It is now, however, becoming more apparent to medical men that diseases of the ear demand the most careful study and investigation, not only because they are of frequent occurrence, but also because their consequences are often very serious, affecting the comfort of the patient, his social relations, his success in business, his intellectual development, and even the duration of his life. This increasing interest in the subject has gradually led to the institution of aural lectureships and cliniques in most of our hospitals and medical schools, in order that the rising generation of medical men may acquire some knowledge of this hitherto much neglected part of the body.

I think, gentlemen, the aim of every medical school should be to furnish facilities to the student of medicine for the practical study of the diseases of every region of the body, within the one general hospital. It is not my intention to discuss the value of the special dispensaries or hospitals which form a prominent feature in the charities of a large city. I shall only say that the more fully a general hospital like this is equipped for the treatment of all forms of disease, the less justification will there be for the establishment of these special institutions. Of course, patients suffering from infectious diseases, or persons afflicted with insanity, must necessarily be treated in hospitals set apart for the purpose, while a practical knowledge of midwifery must be gained chiefly in the homes of patients, or in a special institution.

But, with these exceptions, the ideal of an hospital, which is also intended to be a training school for medical men, demands that no student shall be under the necessity of seeking beyond its precincts for a thorough acquaintance with any particular department of medical science. There never was greater need for conserving the energy, and economising the time, of the medical student than there is at present, when, in the short space of four years, he is expected to attain a more or less intimate knowledge of fully twelve subjects, each of which might occupy a lifetime in its thorough mastery. Every hour of his day is fully occupied, and he has no time to waste in travelling to distant parts of the city in search of experience and information, which might be, and ought to be, provided in such institutions as the Western Infirmary.

A further practical recognition, in this place, of the importance of ear diseases is most desirable, perhaps absolutely necessary. For the satisfactory treatment of purulent inflammation of the tympanum and mastoid cells, total rest for the patient, as well as daily supervision and operative treatment by the surgeon, are frequently required. Such a state of the ear is fraught with more peril to life than many of the diseases that are constantly being treated in the wards of the Infirmary. Thorough treatment, under the favourable conditions established in our wards, would frequently be successful, if patients were only able to take advantage of it before it is too late to try to remedy the evil. I need not say that when an abscess has formed in the brain, or when purulent infection of the blood has taken place, the time for effective treatment is past. In seven cases of purulent ear disease, terminating fatally, which have come under my notice, no aural treatment worthy of the name had been attempted. This is just the place where such treatment could, and should be applied. We might save valuable lives; and our knowledge of this department of medicine would be greatly advanced, since the treatment of such cases in the wards of the Infirmary would allow closer and more systematic observation of the symptoms and course of ear diseases, than we have hitherto had an opportunity of making. It is on these grounds that I trust our directors will soon be enabled, by the liberality of a generous public, more freely extended in a day of returning commercial prosperity, to add to our dispensary department a few beds for the special treatment of the more serious diseases of the ear.

It is very desirable that the specialist, who gives his attention to any particular region of the body, should conduct his public clinique in a large general hospital such as this. Here he enjoys the opportunity, and faces the responsibility of teaching what he himself has learned. The presence of the students has a wholesome and stimulating influence upon the teacher, while there is nothing that more powerfully conduces to clearness and thoroughness in any branch of knowledge than the habitual and systematic effort to communicate instruction to others. All the more gladly, where a branch of the healing art has been comparatively neglected or despised, will the teacher welcome the privilege of commending it to those who are about to join the ranks of the medical profession. By teaching the subject to the future practitioners of medicine, by winning their attention to what is in itself a deeply interesting study, by exciting their enthusiasm at the account of what has already been achieved by earnest labourers in the same field, and by convincing them of the importance of a general knowledge of the subject in the daily practice of every physician, he may hope very soon to raise the subject to the place it ought to hold in the estimation of the whole medical profession and of the general public.

I am sure, gentlemen, that when you enter on the responsibilities of practice, you will find a knowledge of the diseases of the ear of greater service than at first you may be inclined to believe. Allow me, then, after these preliminary remarks, to lay before you, by way of introduction to the actual work of the course, some reasons that should lead you in your medical curriculum to bestow a share of your attention on this branch of the healing art.

*First*.—Diseases of the ear are worthy of your consideration because they are so very prevalent. Unfortunately, their frequency is often underestimated, because there is probably no other part of the body where disease so often exists uncared for by the patient, and unknown to the ordinary medical attendant. Sometimes, indeed, it is only an accidental circumstance that reveals the fact of the existence of defective hearing to the sufferer himself or to his friends. A patient frequently consults me in consequence of a deafness which he believes has been only of a few days' duration. On careful enquiry, however, I may discover that one ear has been closed to sound for many years. Little inconvenience was felt, till perhaps catarrh of the Eustachian tube or of the tympanum has dulled the hearing of his other ear, reducing him to a state of almost

total deafness. Alarm now has brought him for advice, and the recent affection of the one ear has led to the discovery that the other ear has long been practically useless. It is especially among the lower classes of the community that considerable impairment of the function of hearing may exist without interfering in any marked degree with their work, or with their intercourse one with another, and it is long before it is a matter sufficiently serious, in their estimation, to require medical help. Even purulent discharges from the ear, unattended as they often are by pain or by any considerable defect of hearing, are often looked upon as a trivial matter, unworthy of being mentioned to a doctor, so that the family medical attendant is seldom made aware of their existence. If only the parts affected were exposed to view, if the changes which the pathological processes are gradually making upon the structures of the deeper parts of the ear were observed by the patient himself, and if he knew any of the dangerous consequences not unfrequently developed out of purulent diseases of the ear, many more cases of ear disease would come under the notice of medical men, just because there would be a greater anxiety on the part of every patient so suffering to find a cure.

If you ask what explanation is to be given of this prevalence of ear disease, I have only, in the meantime, to remind you how often the ear is implicated in general diseases of the body that are of every day occurrence. In measles, scarlet fever, and small-pox, in mumps and hooping-cough, in typhus fever and tuberculosis, aural complications are frequent and often formidable. Again, syphilitic and serofulvous diseases not unfrequently involve the ear in the most serious morbid changes, while even such common ailments as coryza and catarrhal pharyngitis are often associated with some disturbance of the organ of hearing. In childhood few escape without some inflammatory attack in the ear, resulting, it may be, in a sleepless night of pain; and von Tröltzsch asserts that, in middle life, one person in every three has some aural ailment in at least one ear, and that few persons above the age of 50 have the sense of hearing unimpaired. On account of their frequency, then, I would ask you to devote a portion of your time to the study of the diseases of the ear.

*Second*.—Such diseases are worthy of your attention, not only because they are so common, but also because their accompaniments and consequences are often so serious. The result of ear disease is not unfrequently total loss of hearing, and

that is a calamity too dreadful to be at once fully realised. Without attempting to discuss the question whether blindness or deafness is the greater misfortune, this at least I may say without danger of contradiction—that the loss of hearing has a more isolating influence on the mind of the sufferer than the loss of sight. The deaf are cut off from that ready intercourse of mind with mind which is the highest moral and intellectual training that the world affords. They are deprived of the enjoyments of social intercourse, the delights of music, and the charms of eloquence—a terrible fate which never can overtake the blind. Surely Beethoven, deaf to sound, was a more miserable man than Milton, bereft of sight. Think, again, how serious is the loss entailed on a child by total deafness or very defective hearing. Childhood is the most receptive period of life, and it is by the exercise of the sense of hearing that, in the second and third years of life, language is acquired, which is certainly the most powerful instrument employed in the education of a child. If hearing is lost before the age of 8 years, the power of speech is also lost—the child is reduced to the condition of a deaf mute, and his mental development is rudely checked at the very time when the most important elements of knowledge ought to be acquired—the period of greatest mental growth and progress.

But the influence of even a partial loss of hearing upon a person's position and prospects may be very damaging, especially in the case of the cultured and refined, with wider opportunities for usefulness, and keener sensibilities to mourn the loss of these. One suffering from defective hearing will find himself entirely excluded from some congenial occupation in which he would otherwise engage with zeal; and this infirmity is sure to mar his pleasure and hinder his progress in almost any work on which he may be able to enter. A man at his trade or in his profession, and a woman in her family, are certain to be terribly and continually tormented if they are unfortunate enough to be even only partially deaf.

Then we must remember that the inconvenient effects of dulness of hearing are not confined to the person afflicted with it; his friends, and especially those of the same household, have necessarily to suffer a great deal of annoyance. The frequent repetition of, it may be, some delicate communication in tones progressively increasing in loudness, is a trial which puts the patience to the severest test, and which only the strength of close friendly attachment, or the exigencies of

important business, will enable us to stand. He, then, who cures deafness, or an ear disease that may lead to it, benefits not merely the patient himself, but the whole circle of his acquaintances.

I have spoken of the pain and inconvenience caused by total or partial loss of hearing; but we must next observe that, by a strange irony of nature, while the vibrations of air from without cannot reach the acoustic nerve, or if they do reach it, cannot stimulate that nerve to the perception of sound, the patient may, at the same time, be tormented by the most intolerable noises within the head. This "tinnitus aurium," as it is technically called, is a very frequent attendant upon certain forms of deafness, and is in many cases a much more serious cause of complaint than even the difficulty of hearing. The inconveniences of defective hearing may sometimes be obviated by quickness of vision on the part of the patient, or by his use of such artificial helps as the hearing trumpet or audiophone; and, besides, the power of hearing does not need to be constantly exercised, but the peculiarly painful feature of these subjective sounds is that there is often no interval of relief; they are distressingly painful when present—and they are often continually present with the patient—disturbing the current of his thoughts, and hindering the performance of his duties by day, while they prevent or break in upon his sleep at night. There are cases on record in which the sufferer sought relief from such misery in self-destruction.

But now passing from these painful phenomena confined to the organ of hearing, I must draw your attention to certain conditions threatening life itself, which may be developed out of particular forms of aural disease, and especially out of those attended by purulent discharge from the ear. Those of your number whose hospital experience has been somewhat extensive, may have seen fatal disease of the brain, or of the meninges, or pyæmia, arising from suppurative diseases of the ear. When we come to consider the whole subject in detail, you will better understand how ready a means for the extension of inflammatory disease is provided by the peculiar position and relations of the interior of the ear, and how peculiarly the structure of the temporal bone is fitted to aid in the accumulation and further decomposition of purulent matter, which may be absorbed into the general circulation of the blood. Without giving you more definite statistics, it is enough for me to say that it has been calculated that half the cases of cerebral abscess have an aural origin, while the literature of the subject contains accounts of many cases of

fatal purulent absorption, of the formation of thrombi in the vessels, of metastatic abscesses in the joints, lungs, and other parts of the body, all of which have sprung out of chronic suppurations in the ear. Besides, there can be no doubt that death has not unfrequently been the result of such morbid conditions of the ear, in cases where the existence of the otorrhœa has not been mentioned to the physician, or when both patient and practitioner were ignorant of the dangers so often attendant upon a "running ear." Life assurance companies are beginning to look on this purulent condition of the ear as a matter of some importance in the calculation of the probable duration of life, and the time will soon come when every form of proposal issued to intending insurers will contain the question, "Is there any discharge of matter from the ear?"

There are other phenomena of a very alarming character, such as vertigo or giddiness, which are often witnessed in the course of aural disease. Vertigo may be produced by so slight a cause as the pressure of cerumen upon the tympanic membrane, while on the other hand it may be the result of serious disease of the labyrinth, especially of the semicircular canals. Again, epileptic convulsions, persistent vomiting, cough, and even insanity have been known to owe their exciting cause to an irritation in some part of the ear. The ear is richly supplied with branches of the trigeminus and pneumo-gastric nerves, and both having wide reflex connections, we might anticipate that if they are subjected to irritation from a pathological or other cause, evil results will follow, manifested, it may be, in parts of the body remote from the ear. Many writers, both at home and abroad, such as Arnold, Wilde, Schwartz, and Köppe, have described cases of vertigo, epilepsy, or insanity, undoubtedly due to such causes as the presence of a foreign body in the ear, the existence there of a piece of necrosed bone, or of disease of the mastoid. Even as far back as 1646, Fabricius Hildanus describes the case of a girl, seven years of age, who had a glass ball, of the size of a large pea, pushed into her left ear, which baffled all efforts made to remove it. She was seized with violent pain, alternating with anaesthesia of the left side of the head, followed after some time by epileptic convulsions, while atrophy of the left arm supervened. The girl, after the first efforts to remove the glass ball, never complained of pain in the ear, so that the physicians, subsequently consulted by her, never suspected that that organ was connected with her sufferings till in her eighteenth year, eleven years after the foreign

body had been thrust into the ear, the girl was brought to Fabrieius, who accidentally heard of the ball. He examined the ear, found the ball, and extracted it, with the result that the patient recovered, and thereafter enjoyed perfect health. Again, Schwartze and Köppe, in Germany, relate two very interesting cases of epilepsy, due to aural disease, which were cured by the successful treatment of the aural affection, while the latter narrates two cases of reflex insanity, due to peripheral irritation in the ear.

*Third.*—Having placed before you the frequent occurrence and the serious accompaniments and consequences of aural disease, as reasons why you should devote part of your time to this branch of medical study, I now intend, as an additional incentive and encouragement, to draw your attention to the increased interest taken in ear diseases by the profession generally, which is due to the invention of new appliances for the investigation and cure of ear diseases, and to the beneficial results attained by the use of these appliances. Until recently, the greater number of medical practitioners had little opportunity of attaining any knowledge of this subject; instruction on the subject of aural disease in our medical schools and hospitals was conspicuous by its absence, and any knowledge of it was confined to a few specialists, whose only desire in some cases was to retain exclusive possession of the field, and to discourage other professional inquiry, lest their occupation, like Othello's, should be gone. The natural consequence of this neglect was that the subject, being little understood by the profession at large, was as little esteemed; it was looked upon as the *bête noire* of medical science; great scepticism prevailed regarding the real value of any definite treatment, and yet the most erudite and sometimes mischievous remedies were practised. Purely empirical treatment prevailed, and remedial measures were constantly resorted to without any knowledge of the nature of the disease, or of the condition of the organ.

Let me picture to you the state of matters in the past, which unfortunately is not yet altogether in the past. A pain in the ear, due to inflammation, is treated by large quantities of quinine, on the supposition that it is neuralgia; a foreign body is vigorously searched for by various kinds of forceps, when there is no foreign substance in the ear; polypi are diagnosed when there is not even suppuration; long continued and repeated syringing is employed when there is nothing to wash away—all because the physician is not able to examine the interior of the ear in an intelligent or scientific manner. A

patient from a distant part of the country lately came to consult me regarding deafness and a severe pain in his ear. The auricle and neighbouring parts of the head were reddened, vesicated, much swollen, and very tender—the results of repeated application of Emplast. Cantharidis, which had been ordered by the family attendant for the relief of the malady. A short examination, by means of the ordinary implements for illuminating the canal of the ear, divulged the cause of the trouble—the external auditory canal was tightly plugged with a mixture of cerumen, epidermis, and dust from the atmosphere, on the removal of which, by a few well directed streams of warm water, the patient's sufferings were at once relieved, his hearing restored, and the healing of the external parts alone was needed in order to complete his comfort. Not unfrequently patients present themselves to me whose ears have been diligently probed and roughly manipulated by several medical men in search of a pea, a bead, or some such substance, which the patient asserts has got into it. After the most careful inspection, however, I find nothing but blood marks caused by the various instruments introduced in search of an imaginary foreign body.

A very instructive and curious case is related by von Tröltzsch, which shows the importance of the intelligent examination of the ear, while it also demonstrates the occasional origin of giddiness already referred to. An old man, on coming out of a wine shop one evening, where he had imbibed pretty heartily, fell over the pole of a waggon placed in the way, and, in falling, struck the pavement violently with his head. He thought he lay unconscious for about a quarter of an hour, but he did not know the relative share of blame to be assigned to the fall on the head and to the various liquors in producing this unconsciousness. He got up, however, and reached his home in safety. After a somewhat disturbed night, he and his friends were alarmed to find that he was suffering from almost complete deafness on both sides, as well as from severe giddiness. The physician who was called in shook his head, and, like the patient, could explain the giddiness and the sudden deafness only by the striking of the head on the stony pavement. He pointed out to the family the serious nature of the case, and declared that there was at least concussion of the brain, and perhaps an effusion of blood on the brain. The patient was put upon light diet, was cupped and purged, and, after a few days, a seton was inserted in the neck. The deafness remained as before, the vertigo continued in a fluctuating degree, and the patient

became depressed in mind and weak in body. After some months he happened to come under the notice of von Tröltsch, who, after hearing the story of his affliction, examined the ear and found *both canals completely stopped up with cerumen*. It was softened and easily removed by syringing. Immediately he was cured, not only of his deafness and giddiness, but also of a deep feeling of sadness, which had lasted since his "*concussion of the brain*." In this man's case, the fall on the head had brought the plug of cerumen, which had existed before, into a position which completely closed the canal of the ears, and subjected the membrane to pressure, and thus produced the sudden deafness and giddiness. "Remember this man," said von Tröltsch to his students, "when a case comes before you presenting phenomena which might be referred to the ear, and try to sympathise with the patient who had been so long tormented with giddiness, deafness, and prostration of mind; try also to realise the dismay of the otherwise very able practitioner, when made aware of the true nature of the *brain affection*."

Such cases as I have brought before you illustrate the fact that the most beneficial results may follow an intelligent use of the syringe. We have still to complain, however, that, in general practice, the syringe is used in the most empirical fashion, and that mainly because the physician is even yet unable to illuminate and examine the interior of the ear. Instead of being used to remove cerumen, purulent matter, or some foreign substance from the ear, it is frequently employed as a diagnostic expedient to ascertain if anything is in the passage of the ear, or to diagnose perforation of the membrane by asking the patient if the water has passed into the throat! We sometimes hear patients earnestly asserting that, although the ear has been many times syringed by their medical attendant, yet, evidently to their astonishment, nothing has been got out. It is surely time, gentlemen, that such unscientific procedure should come to an end, both in the interests of the profession and for the welfare of the public.

The appliances now in use for illuminating and examining the external canal of the ear and the tympanic membrane are so simple and so complete that it is blameworthy in the extreme for any medical practitioner to remain in ignorance of them. Furnished with a proper ear speculum and concave mirror, and practised in their use, you may, in all kinds of weather, by artificial or day light, obtain a perfect knowledge of the condition of the internal parts of the ear; while, by the use of the auscultation tube and the Eustachian

catheter, or Politzer's bag, you may obtain an accurate idea of the permeability of the Eustachian passages, as well as information with respect to the presence or absence of fluid in the tympanic cavity. Indeed, we have now diagnostic appliances as efficient for investigating the state of the ear as those used to inquire into the state of any other organ of the body.

The *therapeutics* of ear affections have also made very satisfactory progress in recent years. This is undoubtedly due to improved means of examination, and the consequent increase in our knowledge of the pathology of the organ, which is the true basis of all really scientific treatment. A certain proportion of diseases of the ear are quite incurable, a statement which, unfortunately, must be made of the diseases which attack any other organ of the body. Many aural affections are capable of but slight improvement. A very considerable number, however, may be decidedly improved, while a very fair proportion can be completely cured. To those cases in which the treatment generally secures complete restoration of the function of the organ belong most of the affections of the external canal, the acute and sub-acute catarrhs of the middle ear, and acute inflammation of the same part. In chronic suppurative inflammation of the middle ear, which is the condition usually present in the ordinary "running ear," much benefit is usually derived from judicious treatment, although, of course, we cannot expect complete restoration of any organ after serious organic changes in the structure of its tissues have taken place. In cases of chronic non-purulent catarrh, or of sclerosis of the middle ear, forming, it must be admitted, a very large number of the cases which come before us, especially in a hospital clinique, we can seldom expect anything like a cure. The prospect brightens again, however, when we consider that this is just the class of cases which we may expect will diminish in number when every physician is possessed of sufficient knowledge to enable him to use efficient treatment at an early stage of the disease. We may sum up by asserting that the scientific treatment of aural diseases will produce beneficial results which will bear comparison with those following the treatment of any other part of the body.

I must now, gentlemen, leave it for you to decide whether or not it is reasonable to expect that, for the sake of your success in practice, for the welfare of your patients, for the reputation of our profession, as well as for the future progress of aural surgery, you should give some attention to the study

of diseases of the ear. In my opinion it is very desirable that this branch of medicine should no longer be confined to the narrow limits of a specialty. The general practitioner should be in a position to examine the interior of the ear just as he auscultates the chest, feels the pulse, or examines the pupil. As we have seen, many phenomena in distant parts of the body arise from reflex sympathy with the highly vascular and nervous organ of hearing, and the ordinary physician is much more likely to meet with and elucidate such cases than the mere specialist is. Besides, many valuable opportunities must present themselves, in general practice, for observing ear diseases at an early stage and checking their further progress. For these and other reasons I think it is high time for the student of medicine to claim and obtain all the knowledge that has been gathered on the subject. Jonathan Hutchison says:—"In the early stage of any department of knowledge, it is almost a matter of necessity that it should be in the hands of a few. But it is the highest privilege of those who devote themselves to the reclaiming of new spots of territory to hand them over to the commonwealth to prove that they are now cultivated and worthy of annexation."